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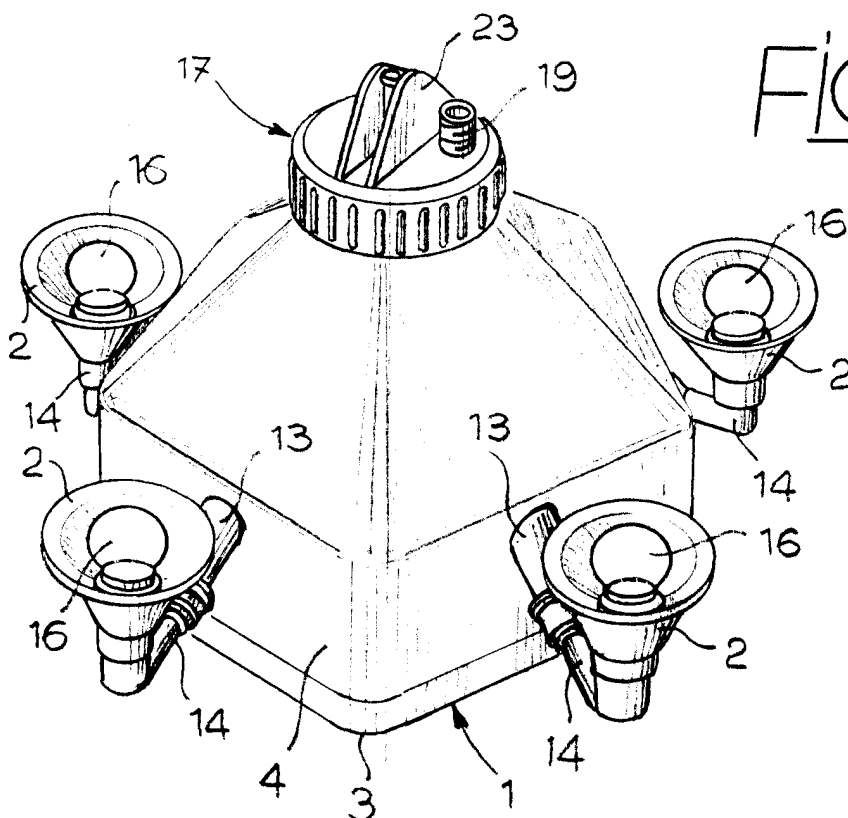
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(54) Drinking vessel for bird breeding

(57) Hanging drinking vessel for bird breeding, comprising a supporting and stabilizing weight defined by a hollow body (1) designed to be filled with a ballast material, normally water, and a plurality of cups (2) project-

ing from the body (1) and connectable to a water supply source. The cups (2) are connected in parallel, by respective independent tubes (12), to an inlet (10, 19) for the supply from the water source.



EP 0 992 188 A2

Description

[0001] The present invention relates in general to drinking vessels for bird breeding, i.e. for poultry farming and the like, and relates more particularly to a drinking vessel of the type comprising a supporting and stabilizing weight with means for hanging it and having a plurality of projecting cups connectable, via respective independent valves, to a water supply source.

[0002] A drinking vessel of this type is described and illustrated in, for example, French Patent application FR-A-2726155, in which the supporting and stabilizing weight is a solid body, and the cups are fixed to common pipe arranged around the edge of the weight, so that when in use they are connected to each other and to the water supply source in series.

[0003] This known construction has a number of drawbacks. In the first place, the solid configuration of the supporting and stabilizing weight makes the drinking vessel very heavy, causing problems for shipping from the place of manufacture to the place of sale or use of the drinking vessel.

[0004] In the second place the series connection of the cups can cause problems of insufficient supply to those cups situated towards the end of the common pipe in the event of heavy demand for water from the cups towards the initial end of this common pipe. Similar problems can arise in the case of leaks from the common pipe or from the connectors between the pipe and the cups.

[0005] In addition, this known drinking vessel is of relatively complicated and expensive construction.

[0006] The object of the present invention is to overcome the abovementioned drawbacks, and this object is achieved principally due to the fact that the said supporting and stabilizing weight of the drinking vessel is defined by a hollow body designed to be filled with a ballast material, normally water, and in that the said cups are connected in parallel, by respective independent tubes, to an inlet for the supply from the said water source.

[0007] The abovementioned inlet preferably includes an annular manifold arranged centrally at the top of the hollow body of the drinking vessel and a cap fitted leak-tightly and removably to the said manifold and incorporating a supply connector.

[0008] In a preferred embodiment of the invention the hollow body is formed by two half shells defining a base and an upper part, respectively, both being of moulded plastic material and joined together permanently along respective opposing annular edges in such a way as to define the cavity of the body.

[0009] The half shell that forms the base is conveniently re-entrant towards the upper part, thus being concave to allow interlocking stacking of the drinking vessel with an identical drinking vessel.

[0010] Other features and advantages of the invention will become clear in the course of the detailed de-

scription given below with reference to the appended drawings which are supplied purely by way of non-restrictive example, in which:

Figure 1 is a schematic perspective view of a drinking vessel for bird breeding according to the invention,

Figure 2 is a side view of the drinking vessel on an enlarge scale,

Figure 3 is an exploded axial cross section of Figure 2,

Figure 4 is a partly cut-away top plan view of Figure 2, and

Figure 5 is a partial axial section through the drinking vessel shown stacked with an identical drinking vessel.

[0011] Referring to the drawings, the drinking vessel according to the invention comprises a body indicated by the general number 1 and being polygonal - pentagonal in the case of the example illustrated - in plan view, from the lower part of which there project a plurality of cups 2, of which there are five in the example illustrated.

[0012] As shown in detail in Figures 3 and 5, the body 2 is hollow and is formed by a half shell forming a base 3 and an upper half shell 4, both of moulded plastic material and joined permanently together along respective opposing annular edges 5, 6. The upper half shell 4 has a raised overall shape and the base half shell 3 forms a re-entrant shape into the upper half shell 4, and is formed with a series of integral projecting ribs 7.

[0013] In the assembled condition of the body 1 shown in Figure 5, the half shells 3 and 4 define a cavity 8 accessible from the exterior through a central aperture 9 formed in the top of the upper half shell 4.

[0014] The upper half shell 4 is also formed integrally, concentrically with the aperture 9, with an annular manifold 10 in the form of an open-topped channel whose radially outer wall is threaded 11. A series of tubes 12, which are also moulded together with the upper half shell 4 radiate out from the annular channel manifold 10, extend downwards and comprise respective lower ends 13 projecting from the body 1. Attached to each end 13 by a bayonet coupling (not illustrated in detail) is a bent connector 14 carrying the corresponding cup 2. In practice, therefore, the cups 2 are connected in parallel, by their respective independent tubes 12, to the annular manifold 10.

[0015] Each cup 2 is provided, in a manner known per se and therefore not illustrated in detail, with its own shut-off valve with an associated float actuator 16.

[0016] 17 denotes a cap having two functions, viz. to complete and seal off the annular channel manifold 10, and to seal off the central aperture 9. For this purpose the cap 17 comprises a wall 18 formed with a supply connector 19, and a side skirt 20 containing a female thread 21 designed to fit the male thread 11 on the manifold 10. Extending integrally from the wall 18 are an ax-

ial protrusion 22 designed to engage in the aperture 9, and on the outside an attachment member 23 for a hanging hook 24 (Figure 2).

[0017] The cap 17 is conveniently formed from a single piece of moulded plastic material. Also, on the inside of its wall 18 are two concentric annular seats containing two O-rings, namely an inner ring 24 and an outer ring 25.

[0018] Because of the particular form of the body 1, and especially because of the re-entrant form of the base half shell 3, the drinking vessel according to the invention can be advantageously fitted together with identical drinking vessels in a stacked arrangement, shown in Figure 5, for storage and shipping.

[0019] When in use, the cavity 8 defined between the half shells 3 and 4 is filled, following removal of the cap 17, with a ballast material, usually water. The cap 17 is then put back on, the thread 21 being screwed fully down onto the thread 11, so that the annular manifold 10 is sealed above by the annular seals 24 and 25, while at the same time the annular manifold 10 is isolated from the central aperture 9.

[0020] The body 1 now filled with water assumes the function of a supporting and stabilizing weight for the drinking vessel when the latter is hung up: for this purpose the hook 24 inserted into the attachment member 23 is connected to a hanging rod in such a way that the base 3 of the drinking vessel is maintained at a predetermined distance from the ground.

[0021] The supply connector 19 in the cap 17 is then connected to a water supply source, causing the cups 2 to be supplied in parallel from the annular manifold 10 through respective independent tubes 12 and their own shut-off valves.

[0022] Needless to say, the details of construction and the embodiments can be considerably modified compared with what has been described and illustrated, without thereby departing from the scope of the present invention as defined in the following claims.

Claims

1. Drinking vessel for bird breeding, comprising a supporting and stabilizing weight with means for hanging it and having a plurality of projecting cups connectable, via respective independent valves, to a water supply source, characterized in that the said supporting and stabilizing weight is defined by a hollow body (1) designed to be filled with a ballast material, normally water, and in that the said cups (2) are connected in parallel, by respective independent tubes (12), to an inlet (10, 19) for the supply from the said water source.
2. Drinking vessel according to Claim 1, characterized in that the said inlet includes an annular manifold (10) arranged centrally at the top of the said hollow

body (1) and a cap (17) fitted leaktightly and removably to the said manifold (10) and incorporating a supply connector (19).

3. Drinking vessel according to Claim 2, characterized in that the cavity (8) of the body (1) communicates with an aperture (9) at the top of the said body (1), and in that the said cap (17) also closes the said aperture (9).
4. Drinking vessel according to Claim 3, characterized in that the said annular manifold (9) is formed by an open-topped circular channel whose radially outer wall is threaded (11), in that the said aperture (9) of the body (1) is concentric with the said circular channel (10), and in that the said cap (17) closes the said annular channel (10) from the top, includes an outer annular wall (20) with a female thread (21) for engagement on the said male thread (11), and possesses an inner central axial protrusion (22) engaged in the said aperture (9) of the body (1).
5. Drinking vessel according to Claim 4, characterized in that the said cap (17) contains two concentric annular seals (24, 25) to seal the said circular channel (10) and prevent communication between the said circular channel (10) and the said aperture (9).
6. Drinking vessel according to Claim 4 or Claim 5, characterized in that the said cap (17) also contains an attachment member (23) from which to hang the body (1).
7. Drinking vessel according to any one of the preceding claims, characterized in that the said body (1) is formed by two half shells (3, 4) defining a base and an upper part, respectively, both being of moulded plastic material and joined together permanently along respective opposing annular edges (5, 6) in such a way as to define the cavity (8) of the body (1).
8. Drinking vessel according to Claim 7, characterized in that the said base (3) is re-entrant towards the upper part (4), thus being concave to allow interlocking stacking of the drinking vessel with an identical drinking vessel.
9. Drinking vessel according to Claim 8, characterized in that the said upper part (4) is formed in one piece with the said circular channel (10) and with the said tubes (12) of the cups (2).
10. Drinking vessel according to Claim 8, characterized in that the said base (3) is formed in one piece with partitions (7) projecting into the cavity (8) of the body (1).
11. Drinking vessel according to any one of the preced-

ing claims, characterized in that the said cups (2) with their respective valves are connected to the said tubes (12) by respective bent connectors (14).

12. Drinking vessel according to any one of the preceding claims, characterized in that the shape of the said body (1) in plan view is polygonal, preferably pentagonal.

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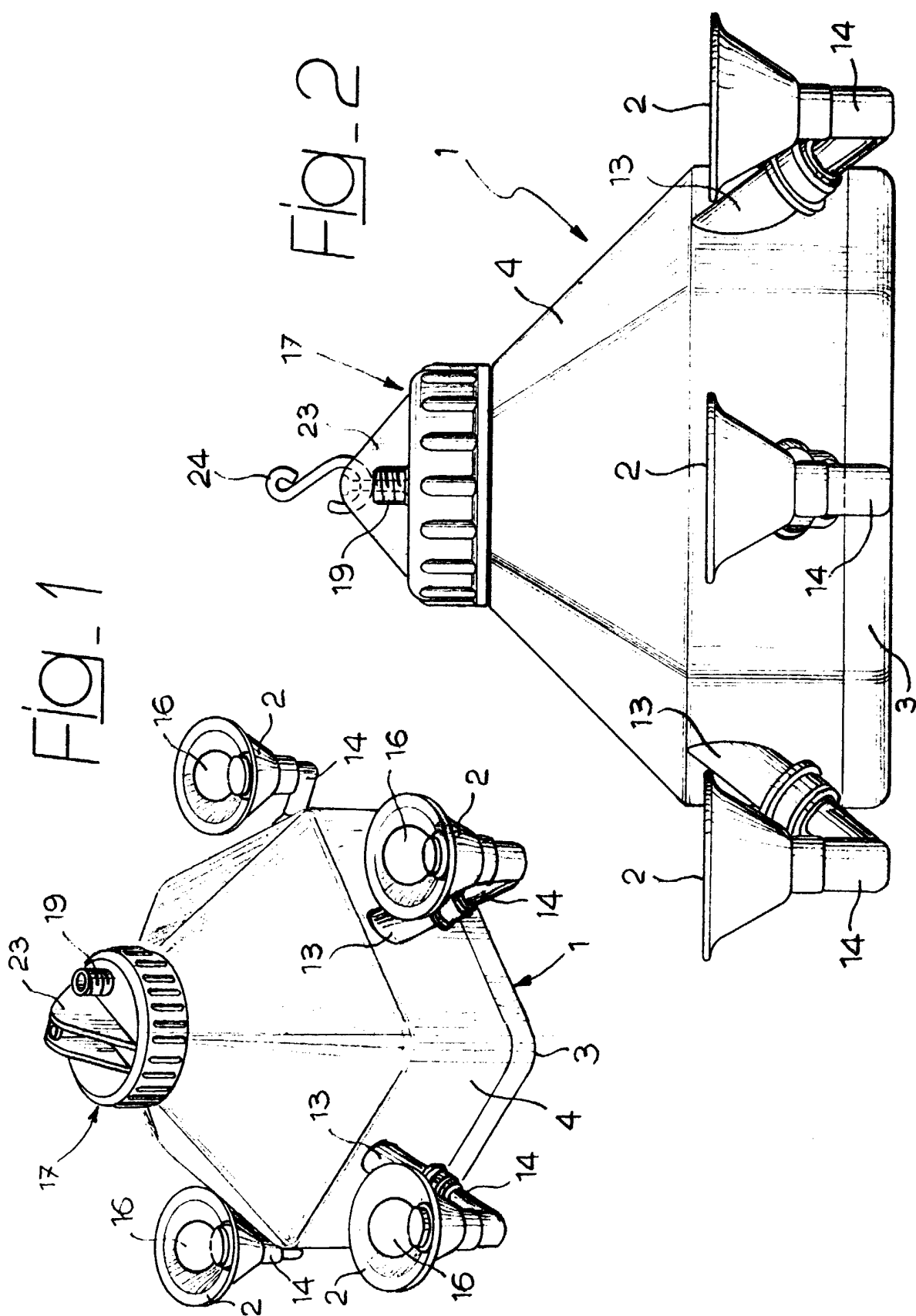
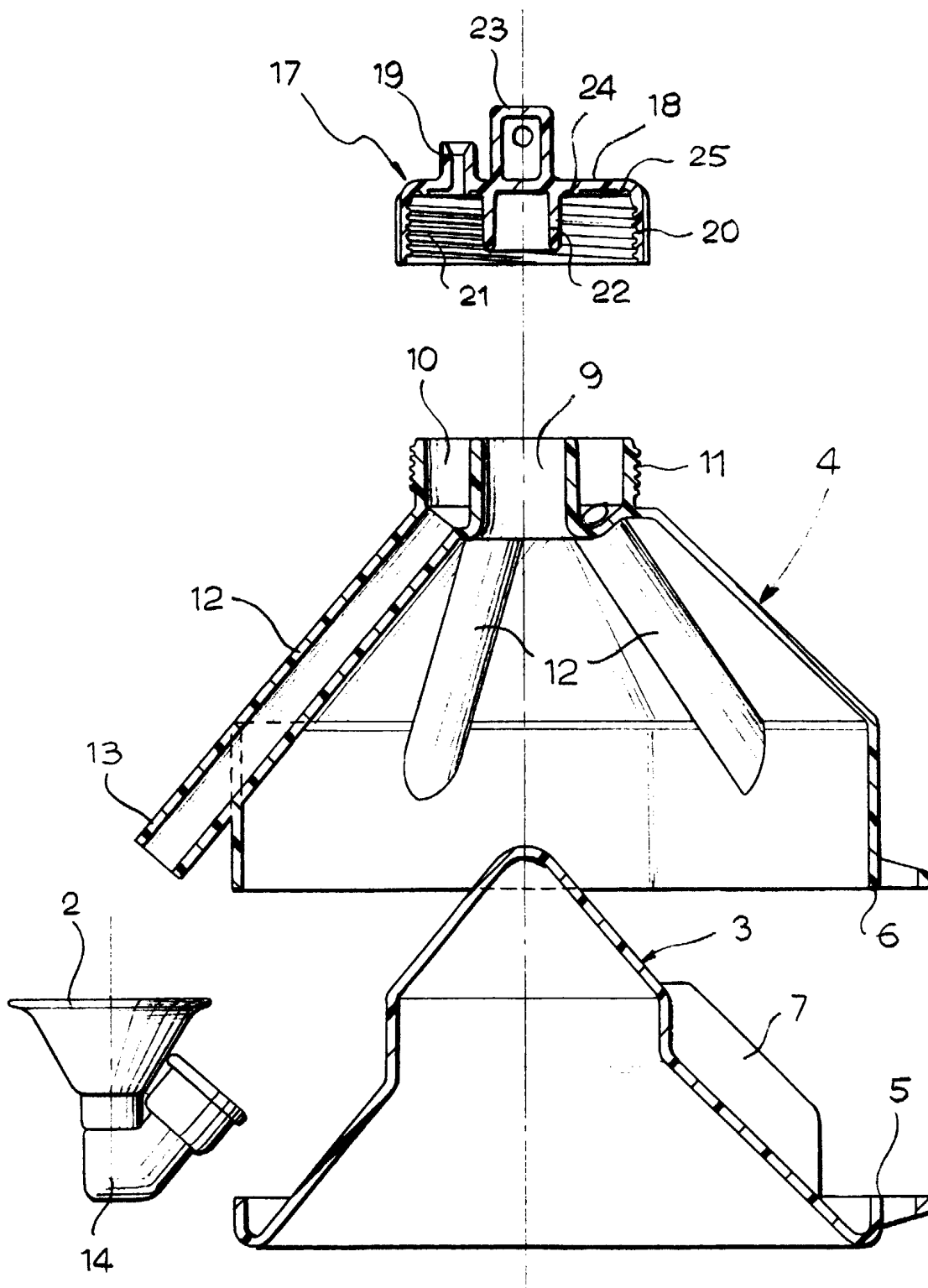


Fig. 3



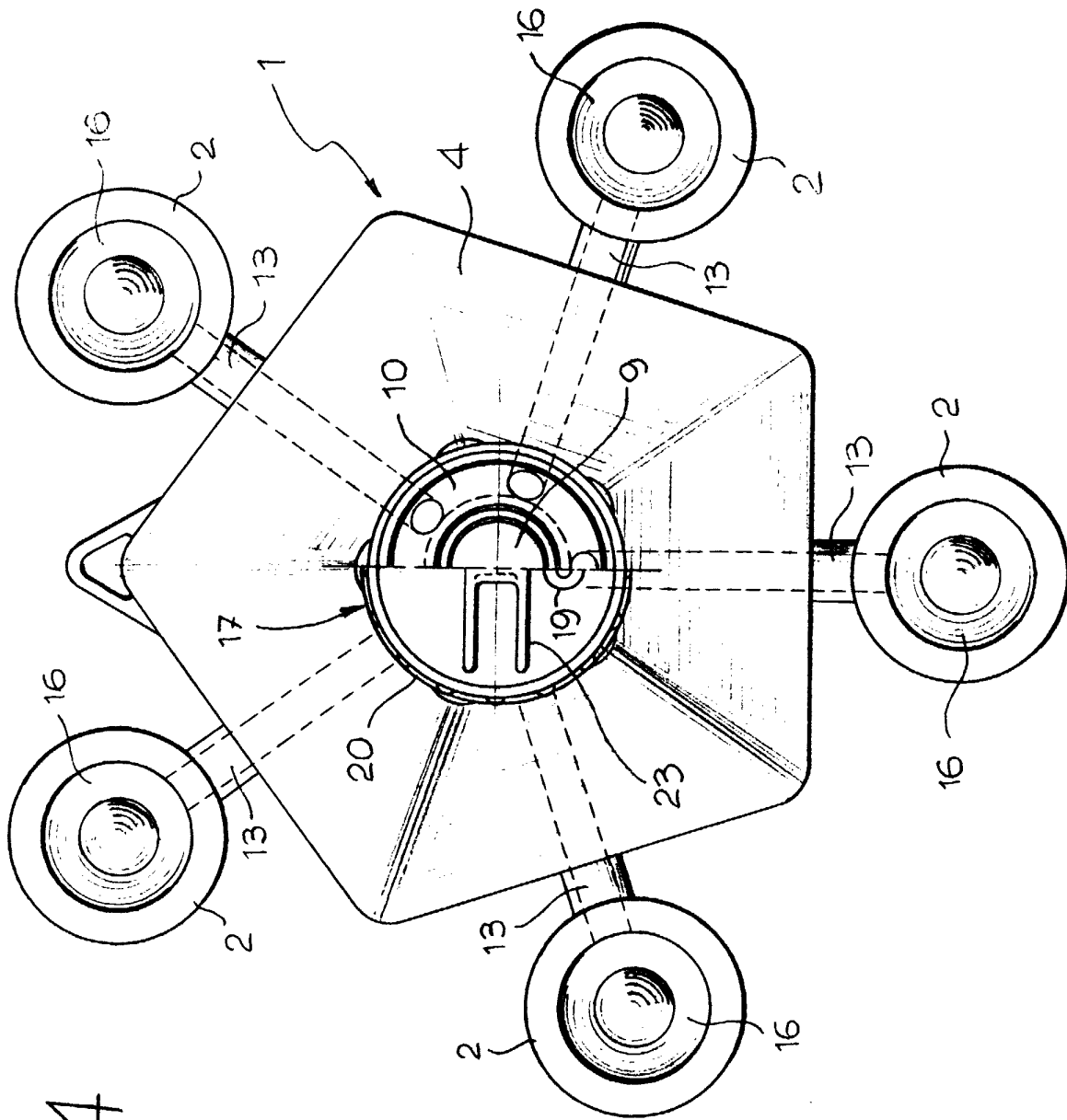


Fig. 4

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